

White Paper

October 2007

W300

Walkman™ phone for everyone



Sony Ericsson

Preface

Purpose of this document

This White Paper will be published in several revisions as the phone is developed. Therefore, some of the headings and tables in this document contain limited information. Additional information and facts will be forthcoming in later revisions.

The aim of this White Paper is to give the reader an understanding of the main functions and features of this phone.

People who can benefit from this document include:

- Operators
- Service providers
- Software developers
- Support engineers
- Application developers

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Sony Ericsson Developer World

On www.SonyEricsson.com/developer, developers will find documentation and tools such as phone White Papers, Developers Guidelines for different technologies, SDKs and relevant APIs. The website also contains discussion forums monitored by the Sony Ericsson Developer Support team, an extensive Knowledge Base, Tips & Tricks, example code and news.

Sony Ericsson also offers technical support services to professional developers. For more information about these professional services, visit the Sony Ericsson Developer World website.

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Product overview

W300 is a small, elegant and compact clamshell that fits perfectly in your hand. The inside contains a large full graphic 1.8 inch 262K color TFT screen and an easy-to-use keypad. When the phone is closed, the keypad and the main screen are protected, eliminating the risk of accidentally making a call while the phone is in a bag or pocket. On the outside there is a practical sub LCD that shows basic information such as time and date, battery status, and network signal as well as detailed track information when using the media player.

The ergonomic keypad with large buttons makes it easy to browse through the phone menu. You can personalize the phone with integrated themes or download new content such as polyphonic ringtones and wallpapers.

With the integrated camera it is always easy to take a snap-shot picture or record a video to share with your friends by using the USB cable, Bluetooth™ or Infrared. W300 includes either a 256 MB or a 512 MB Memory Stick Micro™ (M2™).

To give the user the true online feeling, W300 offers full HTML browsing and support for push email. Connect W300 to a computer by using any of the available transfer methods and synchronize calendars, to-do lists, and contacts. Transfer your favorite tracks fast and easy with the fast USB 2.0 connection on W300.

This phone supports EDGE Class 10 (Enhanced Data rates for Global Evolution) and GPRS (General Packet Radio Service) quad band 850/900/1800/1900 (Class 10 meaning 4+2 sum 5), and GSM (Global System for Mobile Communications). In addition to packet switched (PS) data, it also supports voice and circuit switched (CS) data.

Note: To provide updated information about the implemented technology and functionality of this product, this White Paper will be released in updated revisions.

Key features



VGA camera

With the VGA camera which includes 4x digital zoom (160x120) and many user friendly features, taking pictures becomes easy and fun. Taking a picture or recording a video clip and sending it as part of a multimedia message or as an email attachment is just a few clicks away. The camera also features mirror functionality.



Video recording

By using the built in communicorder, a video recording can be captured and stored in the phone. A video clip can easily be sent off in a picture message for example to friends or family to share experiences with instantly. W300 supports viewing video clips in full screen mode.



1.8 inch color screen

The 1.8 inch (128 x 160 pixels) full graphic 262k color screen enhances viewing of high-quality content in the phone.



The 1.0 inch (101 x 80 pixels) monochrome sub LCD on the front is intended to use as a status screen presenting network status, battery status, time, calendar and media player information.



MP3

The Media player converts the phone into a portable MP3 player. Play music and video clips.



Disc2Phone

You can create your own playlists and albums and transfer them to the phone. Music files can be transferred from a computer to the phone by using Disc2Phone software. Search for and select music on your computer or audio CDs and convert your existing audio tracks to MP3 format. Disc2Phone will be included on the CD in the box.



RDS FM Radio

The FM radio with RDS (radio data system) offers instant and easy access to FM radio channels. The RDS function brings information directly to the display, which is sent out by the currently tuned in radio station. Just plug in the handsfree that works as an antenna and start listening to desired music. The radio can also be used as an alarm signal.



JAVA™ applications including Face Warping

Face Warping transforms any face in a picture into a funny face, and the resulting image can be sent to friends in a message. Download additional applications which are, for example, information- and entertainment-based. This gives users a chance to personalize the functions and features in their phones, and developers the opportunity to create new applications.



HTML web browser support

Browse the Internet and look at the web sites in a different way with Access NetFront 3.3 – An HTML browser which supports a complete web standard suite.



Bluetooth™ wireless technology

Several devices (simultaneous Bluetooth connections) can be connected to W300 using Bluetooth wireless technology up to 33 feet (10 meters) away. For example, the phone can be answered with a Bluetooth headset, when it rings and images can be sent to another phone at the same time. Several mobile phones can take part in a Bluetooth supported game and the phone and a computer can exchange data such as images, video clips, business e-cards, music files and calendar data.



Personal Information Management (PIM)

Stay up to date with everyday events by synchronizing phone contacts, calendar appointments and tasks in the phone with similar programs in a computer. The USB-cable which comes with the phone, the built in Infrared or Bluetooth feature can be used together with the synchronization software which is available on the CD in the kit or can be downloaded from www.SonyEricsson.com/support.



Gaming

Gaming is already a very popular feature in mobile phones, and with Advanced Java, users can add new games and skill levels to further enhance the entertainment value of Sony Ericsson phones. There are several embedded games included in the phone at purchase.

Memory Stick Micro™ (M2™)

W300 supports Memory Stick Micro™ (M2™) up to 2 GB. Different kinds of content (pictures, audio, video clips etc.) can be stored on the Memory Stick™, and transferred to other Sony Memory Stick-compatible consumer products, for example Sony digital cameras, camcorders, portable music players, TVs, photo printers and computers.

Images



Technologies in detail

This chapter offers a detailed description of the technologies available in this product.

Functions and features

The following table is a complete description of the features in this product. It also compares this product to another/two other Sony Ericsson product/s.

Feature	W300	Z530	W810
3D games	X	X	X
Alarm clock Set a time and your phone will ring at that time.	X	X	X
Antenna Built-in.	X	X	X
Backlight display/screen Blue or other colored backlight to illuminate your phone screen.	X	X	X
Battery	3.6V, 900 mAh, Lithium Polymer	3.6V, 900 mAh, Lithium Polymer	3.6V, 900 mAh, Lithium Polymer
Battery charging time	At least 90% charged within 2 hours.	At least 90% charged within 2 hours.	At least 90% charged within 2 hours.
Bluetooth™ wireless technology Wireless connectivity between devices. Range up to 33 feet (10 meters).	X	X	X
Business card exchange Exchange contact information.	X	X	X
Calculator	X	X	X
Calendar Fully functional calendar with day, week and month views and reminders.	X	X	X
Call list View calls made and calls received.	X	X	X
Chinese input method Text input methods based on Simplified or Traditional Chinese. Bopomofo, Pinyin or Stroke.	X	X	X

Feature	W300	Z530	W810
cHTML A mobile device adapted version of the standard Internet communications protocol HTML.	X	X	X
Clock Onscreen clock that keeps time even when the phone is off.	X	X	
Co-branding area	31.5 x 8.3 mm	31.5 x 8.3 mm	6.5 x 20.5 mm
Code memo A safe place to store all your PIN codes and other information. To access Code memo, you only need one PIN code.	X	X	X
Color	Shimmering White Shadow Black	Shimmering White Shadow Black	Satin Black
Contacts Phone book with fields for name, phone and fax numbers, email address, company and title.	X Up to 1000 contacts in phone.	X Up to 1000 contacts in phone.	X
Conference calls Support for multi-party calling.	X	X	X
Content online Downloadable pictures, games, themes, ringtones available online.	X	X	X
Copyright protection - DRM DRM (Digital Rights Management) features the rights and copy protection of downloaded content (audio, pictures, music tones, video, entertainment features such as games, java applications etc.).	1.0	1.0	1.0
Design	Clamshell phone, internal and external display.	Clamshell phone, internal and external display.	Dual front

Feature	W300	Z530	W810
Device Management (DM) DM utilizes (E)GPRS as bearer (basic network connectivity needs to be in place) of the provisioning data and allows the operator to access the phone and check and set different settings such as Network connectivity (E)GPRS, email, MMS, WAP and Java™. Device Management is achieved by supporting Over The Air provisioning 7.1 (OTA), OMA Client Provisioning 1.1 (CP) and OMA Device Management (DM) 1.1.2.	X	X	X
Digital camera menu	X	X	X
Digital zoom	4x	4x	4x
Main display Type: Size: Resolution: Technology: Colors displayed together: Backlight color:	Full graphical 1.8 inch 128 x 160 pixels TFT 262,144 color (18 bit) White	Full graphical 1.8 inch 176x220 pixels UBC 65K(16 bit) White	Full graphical 1.9 inches 128 x 160 pixels TFT 65K (16 bit) White
Sub display Type: Size: Resolution: Technology: Colors displayed together: Backlight color:	Full graphical 1.0 inch 101x80 pixels Monochrome Black & White Orange	Full graphical 1.0 inch 101x80 pixels Monochrome Black & White Orange	
Dual LCD Two displays – one main screen and an outside display that shows network status, time, and, who's calling.	X	X	
EDGE EDGE provides all the benefits of GPRS at significantly higher data rates and enables feature-rich services that require higher data rates than GPRS can deliver. The added bandwidth can also be used to increase capacity for additional customers. W300 supports EDGE Class 10 (4 +2 - sum 5).	X		X

Feature	W300	Z530	W810
Email Built-in email client with inbox, outbox, compose, send and other functions.	X	X	X
EMS (Enhanced Messaging Service) Text messaging with pictures and sounds.	X	X	X
Exterior description Length: Width: Thickness:	90 mm 47.1 mm 24.5 mm	90.1 mm 47.1 mm 24.2 mm	100 mm 46 mm 19.5 mm
Fast port A system connector which enables faster data transfer from phone to PC and PC to phone.	X	X	X
File manager Folder structure storage to help you store and organize pictures, sounds and other phone content.	X	X	X
FM radio with RDS (radio data support) FM radio with presets, auto and manual search. Portable handsfree is used as an antenna. The radio can also be used as an alarm signal.	X		X
Frames Before you take a picture, you can decide to have a frame surrounding picture and view your subject and the frame.	X	X	X
Games download Replace your in-phone games with new ones.	X	X	X
Games embedded	X	X	X
GPRS General Packet Radio Services - a communications standard enabling packet data transfer similar to Internet - 28.8 kbps - 58.6 kbps. It is recommended that you have GPRS to use MMS and content download services.	X	X	X
High Speed Data HSCSD - a communications standard enabling GSM data transfer 14.4 - 28.8 kbps.	X	X	X

Feature	W300	Z530	W810
Icon Desktop A graphic icon desktop with interactive icons.	X	X	X
Infrared port A wireless connector enabling you to connect your phone to a laptop or other infrared device in order to share pictures, synchronize or use the phone as a modem.	X	X	X
Instant messaging Chat - several people can take part in a mobile messaging session where each one sees what the other is writing.	X	X	X
Java™ Support for Java™ technology.	Java 2, Micro Edition (J2ME™), Java 3D	Java 2, Micro Edition (J2ME™), Java 3D	Java 2, Micro Edition (J2ME™), Java 3D
Keypad	Keypad with 12 keys, 2 selection keys, clear and back keys, 4+1 way navigation key, 3 side keys for volume and media player, separate on/off key, customizable navigation key shortcuts, Walkman key inside clamshell.	Keypad with 12 keys, 2 selection keys, clear and back keys, 4+1 way navigation key, side volume keys, separate on/off key, customizable navigation key shortcuts, activity menu.	Keypad with 12 keys, 2 selection keys, clear and back keys, 4+1 way navigation key, volume side keys, separate on/off, camera key, activity menu key, Walkman key
Lunar calendar A calendar system used in China and other parts of Asia. A lunar month is determined by the period required for the moon to complete its full cycle of 29.5 days.	X	X	X
Macromedia Flash Lite™ For impressive animated wallpapers, menus and other graphic elements.	X	X	X
Media player Store and play digital music and video.	X	X	X

Feature	W300	Z530	W810
Memory (built-in) Phone memory that is free for the user to use as you please, for pictures, sounds, and more.	Up to 20 MB	Up to 28 MB	Up to 20 MB
Memory Stick™ A mini peripheral storage device capable of storing pictures, music, applications and more. Compatible with many cameras, PCs and other devices.	Memory Stick Micro™ (M2™)	Memory Stick Micro™ (M2™)	Memory Stick PRO Duo™
Menu shortcuts A function making it possible for you to dedicate shortcuts to your most-used phone functions.	X	X	X
MMS (Multimedia Messaging Service) Picture messaging with text and sound.	X	X	X
MMS video Support in the phone for sending video using MMS.	X	X	X
Modem GSM Internet dial-up support.	X, with tethered data connectivity	X, with tethered data connectivity	X
Flight mode All radio transmitters and receivers are deactivated, making it possible to use the phone only as a WALKMAN™ in airplanes, hospitals and other situations where using a mobile phone is not allowed.	X		X
Music tones Music tones, also called master tones, are DRM protected music by original artists. Various digital audio formats are supported.	X	X	X
MusicDJ™ A sampler music tool with MIDI drum, guitar, keyboard, bass and brass loops in different music styles, which can be combined to create polyphonic ringtones.	X	X	X
Navigation key A four-directional navigation control with press function.	X	X	X

Feature	W300	Z530	W810
Networks	GSM (R99) Quad-band, e- GSM 850, 900, 1800, 1900	GSM (R99) Triple-band, 900, 1800, 1900	GSM (R99) Quad-band, e- GSM 850, 900, 1800, 1900
OTA settings WAP, email and other settings can be sent Over-The-Air to your phone.	X	X	X
Phonebook Store names and phone numbers.	X	X	X
PhotoDJ™	X	X	X
Picture editor A drawing tool in your phone that lets you draw new pictures from scratch or alter existing ones.	X	X	X
Picture effects Add picture effects as fun layers on a picture.	X	X	X
Picture gallery A thumbnail image gallery where you can see sections of several pictures in your screen at the same time.	X	X	X
Picture phonebook Add pictures to your contacts so that, when someone calls, a picture of that person appears onscreen.	X	X	X
Picture wallpaper Background picture onscreen when the phone is in standby mode.	X	X	X
PIM sync (Personal Information Management) Synchronize organizer in PC with phone.	X	X	X
PlayNow™ Download and pre-listen to music ringtones straight from the phone desktop in three clicks.	X	X	X
mã-ólm~ì ëÉ=_ì ířçă Music is only one click away. Play/Pause button allows listening to favorite tunes without having to move between menus.	X		X

Feature	W300	Z530	W810
Polyphonic ringtones	40	40	40
Predictive text input When you write text, predictive text input software predicts what word you are writing and finishes it for you. The prediction is based on previous words used and a customizable dictionary.	X	X	X
Push email	X	X	X
QuickShare™	X	X	X
Redial Identify and redial the most recent caller.	X	X	X
RSS Feeds Use your phone to view up-to-the-minute news.	X	X	X
Screensaver When the phone has not been used for a while, a screensaver activates and the phone goes into 'sleep mode'.	X	X	X
Selection keys Also called softkeys.	X	X	X
Side volume keys Controls on the side of the phone that regulate the volume of incoming sound.	X	X	X
SIM card lock The possibility to protect your SIM card with a four-digit PIN code.	X	X	X
Sleep mode A power saving feature that minimizes battery power consumed when the phone is in standby.	X	X	X
SMS long (Text Messaging) Concatenated SMS text messaging up to 9600 characters.	X	X	X
Sony Ericsson Remote Update Service Download the latest operator approved version of the mobile phone software over the air.	X	X	X

Feature	W300	Z530	W810
Sony Ericsson Update Service Connect the phone to an Internet-connected computer, download the latest operator-approved version of the mobile phone software from the web, www.SonyEricsson.com/support and update the mobile phone.	X	X	X
Sound recorder A mini recording device in your phone that lets you record voice messages or other sounds.	X	X	X
Speakerphone Loudspeaker suitable for using the phone as an office handsfree.	X	X	X
Speed dialing Allocating contacts in your phone book to specific keys on the keypad.	X	X	X
Standby time	Up to 400 hours	Up to 400 hours	Up to 350 hours
Status view When your display shows the network being used, time and other status information.	X	X	X
Stopwatch	X	X	X
SVG Tiny 1.1 Scalable Vector Graphics for impressive animated wallpapers, menus and other graphic elements.	X	X	X
Synchronization Apple® Synchronize and share phone content with Apple® computers.	X	X	X
Synchronization PC Synchronize and share phone content with a computer.	X	X	X
SyncML A device communications standard that enables remote synchronization between devices.	Sync ML 1.2	Sync ML 1.2	Sync ML 1.2
Talk time	Up to 9.7 hours	Up to 9 hours	Up to 8hours

Feature	W300	Z530	W810
Tasks Keeps track of important things to do.	X	X	X
Themes display Phone menu texts and background graphics.	X	X	X
Timer Set your phone to alert after a specific time lapse.	X	X	X
USB connectivity support Connect the phone to a computer with a USB cable and the expandable memory in the phone appears on the computer screen as a mass storage device.	X	X	X
Vibrating alert The phone vibrates and you feel when a call comes in.	X	X	X
Video player Record, play and transfer video clips to another phone or a computer via available transfer methods. File format – video: MPEG4.	X	X	X
Video streaming Real time streaming of video, for example, live cam.	X	X	X
VideoDJ™ Create video sequences by combining different clips and adding music and images.	X	X	X
Viewfinder display When using an in-phone camera or snap-on accessory camera, the picture can be previewed before it is captured.	X	X	X
Voice control Voice answer, reject and call. Assign voice commands to items in your phone book.	X	X	X
Voicemail Support for voicemail operator service including automatic answering and message recording.	X	X	X
Volume control	X	X	X

Feature	W300	Z530	W810
WALKMAN™ key Get direct access to your music files without having to move between the menus. Press the WALKMAN™ key to gain direct access to the WALKMAN™ player. Press to minimize to use other functions with music still playing.	X		X
WALKMAN™ player Advanced digital music player. Supports playing music or video clips, streamed or downloaded.	X		X
WAP 1.2.1 A mobile Internet standard enabling you to access specially designed Internet sites.	X	X	X
WAP 2.0 XHTML A mobile Internet standard enabling you to access specially designed Internet sites. WAP 2.0 supports color and interactive lists.	X	X	X
Weight	94g	93g	99 g

Facts and figures

This chapter offers readers a detailed listing of all the technical data relating to the product. Comprehensive descriptions of performance and technical characteristics are presented in table format for quick and easy access.

Technical specifications

General technical data

System	Quad-band GSM phase 2 recommendations. GSM850 (3GPP 31.101-1), GSM 900 (CTR 19 and CTR 20), GSM 1800 (CTR 31 and CTR 32), GSM 1900 and e-GSM mode supported
Speech coding	HR, FR, EFR, AMR supported where available, for high speech quality.
GSM SIM/ UMTS USIM card	GSM SIM - GSM 11.11, Small plug-in card, 1,8 V and 3 V.
Memory (user free)	Up to 20 MB internal, up to 2 GB on Memory Stick Micro™.
Data transfer speeds	Up to 236.8 kbps (downlink) Up to 118.4 kbps (uplink)

Performance and technical characteristics

Dimension	GSM 850	GSM 900/ E-GSM 900	GSM 1800	GSM 1900
Frequency range (MHz)	TX: 824 – 849 MHz RX: 869 – 894 MHz	TX: 880 – 915 RX: 925 – 960	TX: 1710 – 1785 RX: 1805 – 1880	TX:1850 –1910 RX:1930 – 1990
Channel spacing	200 kHz	200 kHz	200 kHz	200 kHz
Number of channels	124 Carriers *8 (TDMA)	174 Carriers *8 (TDMA)	374 Carriers *8 (TDMA)	299 Carriers *8 (TDMA)
Modulation	GMSK/8PSK	GMSK/8PSK	GMSK/8PSK	GMSK/8PSK
TX Phase Accuracy (GMSK)	<5% RMS Phase error (burst)	<5% RMS Phase error (burst)	<5% RMS Phase error (burst)	<5% RMS Phase error (burst)
TX Modulation Accuracy (8PSK)	<9% RMS EVM	<9% RMS EVM	<9% RMS EVM	<9% RMS EVM
Duplex spacing	45 MHz	45 MHz	95 MHz	80 MHz
Frequency stability	+/- 0.1ppm	+/- 0.1ppm	+/- 0.1ppm	+/- 0.1ppm
Voltage operation (nominal)	3.6 V	3.6 V	3.6 V	3.6 V
Transmitter RF power output (GMSK)	33 dBm Class 4 (2 W peak)	33 dBm Class 4 (2 W peak)	30 dBm Class 1 (1 W peak)	30 dBm Class 1 (1 W peak)
Transmitter RF power output (8 SK)	27 dBm RMS Class E2 (500 mW)	27 dBm RMS Class E2 (500 mW)	26 dBm RMS Class E2 (400 mW)	26 dBm RMS Class E2 (400 mW)

Dimension	GSM 850	GSM 900/ E-GSM 900	GSM 1800	GSM 1900
Transmitter Output impedance	50 ohm	50 ohm	50 ohm	50 ohm
Transmitter Spurious emission (according to specification)	< -36 dBm up to 1 GHz < -30 dBm over 1 GHz (according to spec.)	< -36 dBm up to 1 GHz < -30 dBm over 1 GHz	< - 30 dBm	< - 30 dBm
Receiver RF sensitivity	Better than – 102 dBm at 2.4% RX BER	Better than – 102 dBm at 2.4% RX BER	Better than – 102 dBm at 2.4% RX BER	Better than – 102 dBm at 2.4% RX BER

USSD technical data

Feature	Support
USSD support	GSM Phase 1/2 (Cross-phase compatibility). (E)GPRS behavior according to class B.
Mode support -mode	UI-mode supported. SAT initiated USSD supported.
UI-mode details	<ul style="list-style-type: none"> It is possible to scroll the text up and down in USSD messages. It is possible to highlight embedded numbers and take actions accordingly.

(E)GPRS technical data

Dimension	Support
Compatible (E)GPRS and SMG specifications	Release 99 according to ETSI specification.
Data rates	Multislot class 10 supported (4+2) CS-1, CS-2, CS-3, CS-4 9,050 bps, 13,400 bps, 15,600 bps, 21,400 bps supported (network-dependent).
Medium Access Modes	Dynamic allocation
Support of Packet Control Channels (PBCCH/PCCCH)	Yes
Network operation mode	NOM I, II, III
Support of (E)GPRS/CS combined procedures	Yes

Dimension	Support	
Network control mode	NC0 and 2	
Support of access in 2 phases	Yes	
Support of PRACH on 11 bits	Yes	
Support of GPRS re-selection C31/ C32	Yes	
Support of static and dynamic addressing	Yes	
Support of power control Uplink and Downlink	Uplink = yes, Downlink is a network feature.	
Support of ciphering algorithms	GEA1, GEA2	
Support of compression algorithms	Yes, V42bis and IP header compression.	
Mode of operation	Class B and Class C modes of operation supported.	
R Reference point	Physical layer: Support of RS232 PPP is supported as L2 layer in the R reference point Authentication algorithms PAP, CHAP supported	
IP connectivity	PDP type IP is supported IP termination in mobile or TE (laptop, PDA) supported	
PDP context	10 PDP context descriptions stored in mobile PDP context description is edited via application in mobile, AT-command or via OTA Simultaneous PDP contexts are supported, maximum 2.	
SIM	GPRS aware, as well as non-GPRS aware; SIM cards are supported.	
AT commands supported	AT+CGDCONT - DEFINE PDP CONTEXT AT+CGQREQ - Quality of Service Profile (REQUESTED) AT+CGQMIN - Quality of Service Profile (Minimum Acceptable) AT+CGATT - PACKET DOMAIN SERVICE ATTACH OR DETACH	AT+CGACT - PDP CONTEXT ACTIVATE OR DEACTIVATE AT+CGDATA - ENT

SIM AT services supported

Service	Mode	Support
CALL CONTROL BY SIM		Yes
DATA DOWNLOAD TO SIM	Cell Broadcast SMS	Yes Yes

Service	Mode	Support
DISPLAY TEXT	Text of up to 240 characters (120 UCS2 coded).	Yes
	bit 1: 0 = normal priority	Yes
	1 = high priority	Yes
	bit 8: 0 = clear message after a delay	Yes
	1 = wait for user to clear message	Yes
GET INKEY	General: The GET_INKEY requires that the user confirms his/her choice	Yes
	bit 1: 0 = digits (0-9, *, # and +) only	Yes
	1 = alphabet set	Yes
	bit 2: 0 = SMS default alphabet	Yes
	1 = UCS2 alphabet	Yes
	bit 3: 0 = character sets defined by bit 1 and bit 2 are enabled	Yes
	1 = character sets defined by bit 1 and bit 2 are disabled and the Yes/No response is requested	Yes
GET INPUT	General: No. of hidden input characters	252
	bit 1: 0 = digits (0-9, *, # and +) only	Yes
	1 = alphabet set	Yes
	bit 2: 0 = SMS default alphabet	Yes
	1 = UCS2 alphabet	Yes
	bit 3: 0 = ME may echo user input on the display	Yes
	1 = user input not to be revealed in any way (see note)	Yes
	bit 4: 0 = user input to be in unpacked format	Yes
	1 = user input to be in SMS packed format	Yes
	bit 8: 0 = no help information available	Yes
	1 = help information available	Yes
LAUNCH BROWSER		Yes
MORE TIME		Yes
PLAY TONE		Yes
POLLING OFF		Yes
POLL INTERVAL		Yes

Service	Mode	Support
PROVIDE LOCAL INFORMATION	'00' = Location Information (MCC, MNC, LAC and Cell Identity)	Yes
	'01' = IMEI of the ME	Yes
	'02' = Network Measurement results	Yes
	'03' = Date, time and time zone (DTTinPLI)	Yes
	'04' - Language setting	Yes
	'05' - Timing setting	Yes
REFRESH	General: The reset option requests the user to wait while the phone restarts	Yes
	'00' =SIM Initialization and Full File Change Notification	Yes
	'01' = File Change Notification	Yes
	'02' = SIM Initialization and File Change Notification	Yes
	'03' = SIM Initialization	Yes
	'04' = SIM Reset	Yes
SELECT ITEM		Yes
SEND DTMF		Yes
SEND SHORT MESSAGE	bit 1: 0 = packing not required	Yes
	1 = SMS packing by the ME required	Yes
SEND SS		Yes
SEND USSD		Yes
SET UP CALL	General: Capability configuration	Yes
	Set-up speech call CallParty	No
	Subaddress DTMF support	Yes
	'00' = set up call, but only if not currently busy on another call	Yes
	'01' = set up call, but only if not currently busy on another call, with re-dial	Yes
	'02' = set up call, putting all other calls (if any) on hold	Yes
	'03' = set up call, putting all other calls (if any) on hold, with re-dial	Yes
	'04' = set up call, disconnecting all other calls (if any)	Yes
	'05' = set up call, disconnecting all other calls (if any), with re-dial	Yes

Service	Mode	Support
SET UP EVENT LIST	'00' = MT call	Yes
	'01' = Call connected	Yes
	'02' = Call disconnected	Yes
	'03' = Location status	Yes
	'04' = User activity	Yes
	'05' = Idle screen available	Yes
	'06' = Card reader status	Not Applicable
	'07' = Language selection	Yes
	'08' = Browser termination	Yes
	'09' = Data available	No
	'0A' = Channel status	No
SET UP IDLE MODE TEXT		Yes, 1 row of text is supported
SET UP MENU		Yes
TIMER MANAGEMENT		Yes
OPEN CHANNEL		No
CLOSE CHANNEL		No
RECEIVE DATA		No
SEND DATA		No
GET CHANNEL STATUS		No

User Interaction with SIM AT

Display text

Text of up to 240 characters (120 UCS coded) is supported.

Text clearing times are 5-20 seconds and a 60-second time-out limit for the user to clear the text.

'Key' responses:

- 'Long Back' – Proactive session terminated by user.
- 'Back' – Backward move in proactive session.

Any other key clears the display if the command is performed successfully.

Get inkey

Prompt for a one-character input. Pressing 'Ok' without entering a character gives warning message "Minimum 1 character". 'Key' responses:

- 'C' clears current character.
- 'Long Back' terminates the proactive session.
- 'Back' – Backward move in proactive session.
- 'OK' – Command performed successfully.

Get input

Prompt for character input. The phone will refuse to accept further input when maximum response length is exceeded. UI Maximum Response lengths:

- Digits Only – 160 characters.
- SMS default alphabet characters – 160 characters.
- Hidden Characters (digits only) – 20 characters.

‘Key’ responses:

- ‘C’ clears current character.
- ‘Long Back’ terminates the proactive session.
- ‘Back’ – Backward move in proactive session.
- ‘OK’ – Command performed successfully.

Select item

Scroll to highlight item for selection. ‘Key’ responses:

- Navigational key press down – Scroll down list.
- Navigational key press up – Scroll up list.
- Long ‘Back’ terminates proactive session.
- ‘Back’ – Backward move in proactive session.
- ‘OK’ – Command performed successfully.

Send short message

Default message “Sending message, please wait” can be replaced for the Alpha Identifier text, or suppressed completely if a null text is provided. Default responses are “MESSAGE FAILED” or “MESSAGE SENT”. ‘Key’ responses:

- Long ‘Back’ or ‘Back’ ends the proactive session.

Set up call

If the ME is on a call when the command ‘Set up Call’, ‘putting all other calls on hold’ is sent, the user will see the text ‘Setting up a call current call will be held’. If ‘OK’ is pressed the current call will be put on hold and the new call set up. If the ME is on a call when the command ‘Set Up Call, disconnecting all other calls’ is sent, the user will see the text ‘Setting up a call current call will be disconnected’. If the ‘OK’ key is pressed the current call will be disconnected and the new call set up.

Set up menu

Incorporates a SIM Application Toolkit Menu Item into the ME’s main menu structure.

If an Alpha Identifier is supplied in the Set Up Menu command, this is used as the SIM AT entry in the ME’s main menu. If no alpha identifier is supplied and several items are found in the menu, a default title is used. If the SIM AT Menu Item is selected by pressing ‘Select’, all the items sent in the Set Up Menu command will be available for selection, in the same way as the Select Item command.

WALKMAN™ player

File format	File extension	File format
Audio	AAC MP3 (192 kbit/s for local playback) MP4 M4A 3GP (Audio encoded in AAC or AMR) AMR WAV G-MIDI (level 1 with 40 voices polyphony)	.mp3 .mp4 .m4a .3gp .amr .wav .mid
Video (including audio part)	MP4 (video: MPEG4, audio: AAC or AMR) 3GP (video: MPEG4 or H.263, audio: AAC or AMR)	.mp4 .3gp
Streaming transport	RTSP according to 3GPP™	
Video coding	MPEG-4 Simple Visual Profile Level 0 H.263 Profile 0 Level 10	
Audio coding	AAC, AMR, MPEG layer 3	
Features	Automatic loop of songs in folder Automatic pause on telephone call.	
Ringtone file formats	MIDI (General MIDI 1, SP-MIDI) E-Melody I-Melody AMR-NB MP3 MP4 3GP M4A WAVE XMF	

Radio with RDS

Power	Class 1
Output	Portable handsfree External stereo speakers
Save channels	Yes, 20 presets
Antenna	Stereo portable handsfree

VGA camera

Facts and figures	
Picture sizes (resolution)	VGA (640x480) QVGA (320x240) QQVGA (160x120)
Color depth	24 bit (8 bit per RGB channel)
Camera memory	Using phone memory or Memory Stick Micro™ (M2™); no memory dedicated to the camera only.
Digital zoom	No zoom - VGA (640x480) 1-2x - QVGA (320x240) 1-4x - QQQVGA (160x120)
Flash light	No
Auto focus	No
Night mode	Yes
Self-timer	Yes
Effects	Negative/ Solarize/ Sepia/ Black&White/ Off
White balance	Auto/ Incandescent/ Fluorescent/ Daylight/ Cloudy
Picture quality	Choose between Normal and Fine
Time and date	Add a time and date to a picture
Video recorder	
Video sizes	176 x 144 128 x 96
Shoot mode	For picture message/High quality video

Pictures and animations

Formats	JPEG, BMP, GIF (including animated), PNG, WBMP, Macromedia Flash and Scalable Vector Graphics
Sharing via	MMS, EMS, WAP, IR, Bluetooth™, email or Cable.

Image decoders

Decoder	Details	Size	Color depth	File format
GIF	87a/89a			

JPEG	ISO/IEC JPEG Baseline DCT Progressive DCT Non-differential Huffman coding Symbol 'SOF2'	VGA	JFIF v1.02 EXIF
BMP	The bitmap image format used by Windows®.	XRAM dependent, 24 bit default is VGA	
WBMP			
PNG			

Image encoders

Decoder	Details	Size	Color depth	File format
GIF	89a			
JPEG	ISO/IEC JPEG Baseline DCT Non-differential Huffman coding Symbol 'SOF0'	VGA		JFIF v1.02
BMP	The bitmap image format used by Windows®.	XRAM dependent, 24 bit default is VGA		
WBMP				

Short Messaging Service

Feature	Support
SMS Centre Number	It is possible to pre-load the SMS Centre Number.
Pictures	It is possible to insert a picture or an icon into the text message. EMS compliant mobile handsets will be able to see the picture correctly.
Input methods	Predictive text input and multitap.
Reply to messages	It is possible to reply to received messages by SMS, phone call or email.
Message creation methods support:	Predictive writing and multitap.
Copy, cut and paste words	Yes
Teaching of predictive words that are not in the predictive dictionary	Yes
Possibilities when creating a message:	

Feature	Support
save a sent message in a "Sent items" folder	Yes
insert a line in the message	Yes
assign a validity period to the message	Yes
use pre-defined messages	Yes
Possibilities when receiving a message:	
reply to the sender	Yes (only to the sender, not to all or part of the message recipients).
forward the message	Yes
save the message on SIM	Yes
get delivery time and date	Yes
Possibilities of the previously sent message:	
delivery report of the message	Yes
forward the message	Yes
save the message on SIM	Yes
know the remaining capacity storage	No, but notification when 95% full
Possibilities of the previously received message:	
reply to the sender	Yes (only to the sender, not to all or part of the message recipients).
save the message in the Inbox	Yes
forward the message	Yes
know the remaining capacity storage	No, but notification when 95% full
Supported ways for replying to a received SMS:	
via SMS	Yes
via phone call (set up a call to the number contained in the message body)	Yes
via WAP call (go to the WAP address contained in the message body)	Yes
via USSD session	No
Possibility to offer the user the ability of sending an SMS to a list of recipients	Yes, using groups in Contacts or adding multiple separate recipients.
Possibility to write an email address as a recipient address	Yes, if SMS type = email.

Feature	Support
SMS storage	On the SIM and in the phone.
Nokia Picture Messaging	Yes

Enhanced Messaging Service

Feature	Support
Level of compliance supported by the handset regarding the specifications described in release 99.	Enhanced Messaging Service (EMS) according to the standard 3GPP™ TS 23.040 v4.3.0, with the addition of the ODI feature from 3GPP™ TS 23.040 v5.0.0.
Number of messages that the handset is able to handle to generate a concatenated message	20
Capacity storage	200 and the space left on the SIM card.
Outgoing messages	It is possible to... <ul style="list-style-type: none"> • see how many short messages an EMS message consists of before sending it. • choose whether to send the message or not after writing it.
Incoming messages	<ul style="list-style-type: none"> • A signal is heard once all parts of the message have been received or when a timeout occurs. • It is possible to re-use the content of an EMS message. Sounds, pictures, and animations can be inserted in a new message, if the object is not protected using ODI.
Concatenated messages	A receipt is received in the handset when all parts of a concatenated message have been delivered.
Insert objects	It is possible to add pictures, animations and sounds to an EMS message.
Sounds	Chimes high, chimes low, ding, tada, notify, drum, claps, fanfare, chords high, chords low.
I-melody	Yes, version 1.2.
Melodies	It is possible to... <ul style="list-style-type: none"> • send and receive melodies via EMS, if the melodies are not protected by copyright. • download melodies and commercial tunes from WAP/WAP portals. • create melodies on WAP/WAP portals.
WBMP	Yes
Picture sizes	16x16 mm, 3 x32 mm, variable size in black and white.

Feature	Support
Pictures	<p>It is possible to...</p> <ul style="list-style-type: none"> • edit pictures by using the phone keypad. • send and receive pictures via EMS, if the pictures are not protected by copyright. • create pictures on WAP/WAP portals. • download pictures from WAP/WAP portals. • receive pictures in enhanced messages originated by service providers.
Animations	<p>The handset supports the following animations: Angry, Crying, Flirty, Happy, Kiss, Sad, Tongue, Wow, Confused, Devil, Glasses, Indifferent, Laughter, Sceptical and Wink. Plus the other nine animations defined in 3GPP™ TS 23.040 v4.3.0.</p> <p>It is possible to...</p> <ul style="list-style-type: none"> • send and receive animations.
TP-PID field value given by the handset before sending an EMS message	0x00

Multimedia Messaging Service

Feature	Support
MMS/CSD parameters and MMS/(E)GPRS parameters placement	MMS is bound to a WAP profile. A WAP profile is bound to a Data Account. A Data Account contains either CSD parameters or (E)GPRS parameters.
Possibility to pre-configure the MMS parameters in factory	<ul style="list-style-type: none"> • MMS/CSD: Yes • MMS/(E)GPRS: Yes
Possibility to configure the MMS parameters by OTA provisioning	<ul style="list-style-type: none"> • MMS/CSD: Yes • MMS/(E)GPRS: Yes
Possibility for all the parameters from the parameters set to be OTA provisioned at the same time	<ul style="list-style-type: none"> • MMS/CSD: Yes • MMS/(E)GPRS: Yes
Possibility for only one parameter from the parameters set to be OTA provisioned	<ul style="list-style-type: none"> • MMS/CSD: No • MMS/(E)GPRS: No
OTA provisioning solution	OTA Settings Specification v7.1 © Ericsson and Nokia
Supplier indication of realized interoperability tests between its MMS User Agent and MMS Relay/Server from other suppliers	Yes
Support of a standard or a proprietary procedure for OTA provisioning of MMS parameters	Proprietary

Feature	Support
Functionalities that the user is able to set during message composition:	<ul style="list-style-type: none"> • message subject • message priority • email recipient address • message Cc recipient(s) address(es) • delivery report request • read report request • MSISDN recipient address
From where can the user insert multimedia elements into multimedia messages:	<ul style="list-style-type: none"> • File Manager • directly from camera • Contacts • Calendar
Possibility for sent messages to be memorized into a folder in handset memory	Yes
Actions that the user can perform after message notification:	<ul style="list-style-type: none"> • Auto Download • Always Ask
Actions that the user can perform after message retrieval:	<ul style="list-style-type: none"> • reply to the sender of the message SMS/MMS • reply to the sender and to Cc people SMS/MMS • forward the message MMS • delete the message • save message into terminal • call the sender of a message
Multimedia codecs/formats supported for audio	AMR
Multimedia codecs/formats supported for video	MPG4, 3GPP™, SDP
Multimedia codecs/formats supported for image	JPEG, GIF87, GIF89A, PNG, SVG, WBMP, BMP
Supported formats for message presentation:	<ul style="list-style-type: none"> • message body + attachments (email presentation) • SMIL version as described in OMA MMS IOP document version 1.2
Maximum message size that can be handled by the handset for message	Content Class and Creation mode are applied. Also maximum size is possible to customize.
MMS User Agent will report problems to user in case of:	<ul style="list-style-type: none"> • message not sent causes no user subscription to service, if included in ResponseText (please see WAP209) • message not sent causes required functionality not supported by MMS Relay/Server, if included in ResponseText (please see WAP209) • message not sent causes insufficient credit (in case of prepaid charging), if included in ResponseText (please see WAP209)

Bluetooth™ technical data

Dimension	Support
Bluetooth capability statement	This phone is manufactured to meet Bluetooth™ Specification 2.0
Bluetooth functions	Basic Imaging Profile Dial-up Networking Profile File Transfer Profile Generic Access Profile Generic Object Exchange Profile Handsfree Profile Headset Profile Human Interface Device (HID) Profile Object Push Profile Personal Area Network Profile Serial Port Profile Synchronization Profile SyncML OBEX binding
Connectable devices	All products supporting Bluetooth™ spec. 1.1, or higher, and at least one of the profiles above.
Coverage area	Varies due to radio performance on remote device and the occurrence of obstacles. Up to 33 feet (10 meters).
Transmission power	2mW (3 dBm)
Frequency band	2.4 GHz - the unlicensed ISM band.
Power consumption	GSM host processor excluded: <ul style="list-style-type: none"> • Standby, Bluetooth On mode: <0.9mA • Voice mode: 24 mA • Data mode average: 25mA
Data transmission rate	Up to 600 kbps asynchronous and up to 350 kbps synchronous from an application level.
Specific commands working with the SIM card	No

SyncML technical data

Feature	Support for Sync ML
SyncML compliance	The handset is fully SyncML compliant, having passed SyncML Conformance testing. SyncML 1.2 or SyncML 1.1.2 is used depending on the configuration and both are supported in Server-alerted synchronization.
Basic data formats	Contacts: vCard 2.1, Calendar: vCalendar 1.0 (vEvent), Tasks: vCalendar 1.0 (vTodo), Notes: text/plain
Possibility for operators to extend SyncML functionality.	No

Feature	Support for Sync ML
Possibility to synchronize other handsets using SyncML.	No
Transport method for SyncML messages.	HTTP, OBEX (IR, USB, Bluetooth)
Synchronization application placement.	Inside the handset.
Possibility for the user to configure login parameters (e.g. username and password) to access the remote database.	Yes
Configuration parameters that can be entered/modified by the user.	Server URL, Username, User PWD, Paths to databases (Calendar, Contacts, Tasks and Notes) UserID and PWD for Databases, Databases to be synchronized (on/off), Internet profile, Synchronization interval, Server ID and Server PWD. Can be provisioned with Ericsson Nokia OTA Settings Specification v7.1, OMA Client provisioning v1.1, and OMA Device Management 1.1.2.
Mechanisms used by the handset to capture changes made by the end user (i.e. how does the SyncML client in the handset know which changes were made to the address book).	It uses a change log where it marks the contact as updated.
Ability to deal with multiple servers.	Yes
Ability to perform conflict resolution actions.	No

Web browser technical data

Feature	Support in the browser
Back to previous page	Yes
Bearer type (E)GPRS (IP)	Yes
Bearer type GSM Data (IP)	Yes, HSCSD, ISDN and analog.
Bookmarks	Yes, up to 100 named bookmarks for easy to frequently visited pages. Folders and sorting supported.
Bookmark Export/Import	Yes, can be sent and received using vBookmark format via Infrared, Bluetooth, SMS, MMS and email.
Cache	Yes (size 300 kB).
Character sets *	UTF-8 (Default), UTF-16, USASCII, Latin1, UCS2.
Clear cache	Yes

Feature	Support in the browser
Color	Color display.
Home page	Yes, up to 10 different; one for each Internet profile.
HTML version for browser	XHTML, Mobile Profile 1.2, HTML 4.01, WML 1.3
Hyperlinks in Text	Yes, highlighted as blue text
Hyperlinks in Images	Yes, indicated by a frame
Image Animation	Yes
Image Formats	GIF (interlaced and non-interlaced) WBMP, no transparent layers, JPEG, PNG, BMP, SVG-Tiny.
Network Settings	Up to 10 different settings available by selecting profile (Internet, Banking, Gateway etc.).
OTA Support	Yes
PPP Authentication	PAP, CHAP supported.
Reload page	Yes
Security	WTLS class 1-3 TLS version 1, Client authentication SSL version 3, Client authentication WIM on SIM ICC X.509 certificate support, WAP Profile WPKI OTA download of trusted certificates
Tables	Yes
User Agent Profiles	Yes, list of client characteristics - for example display size.
WAP/WML WAP	WAP 2.0/WML 1.3
Internet profiles	Dynamic - up to 10 internet profiles, each with its own settings.

Operator technical data

Feature	Support for browser
Web Browser	
Version	2.0 baseline
HTML	XHTML Mobile Profile
Access NetFront 3.3	<ul style="list-style-type: none"> HTML 4.01, XHTML 1.1 Including mobile profile CSS 1 & CSS 2 (Partial) ECMAScript 3rd edition (equal to Java script 1.5) DOM level1, level2 and Dynamic HTML (Partial) Graphic Formats: GIF, Animated GIF, JPEG, Progressive JPEG, PNG, MNG, BMP, WBMP
PROVISIONING	

Feature	Support for browser	
Provisioning types	The Ericsson-Nokia OTA solution Over the Air Settings Specification, v7.1 © Ericsson and Nokia	OMA Client provisioning (v1.0)
Total Parameter sets	10 (shared between the provisioning types). < or = 10 (total number of profiles).	
Parameter set list	name, homepage and homepage title (1st bookmark element), proxy/GW address, bookmarks (remaining bookmark elements), CSD phone number, CSD data rate, CSD dial type, (E)GPRS APN, protocol authentication, GW authentication, secure connection on/off	name, homepage, proxy/GW address, CSD phone number, CSD data rate, CSD dial type, CSD response timer, (E)GPRS APN, protocol authentication, GW authentication, (E)GPRS QoS
Parameter sets include	CSD, (E)GPRS (different sets).	
Factory pre-configuration	CSD (possibility to lock a setting), (E)GPRS.	
OTA	CSD, (E)GPRS configuration possible.	
Security mechanism		
Bearer	The Ericsson-Nokia solution	OMA Client Provisioning
OTA via SMS	Operator verification through a code that can be included in the OTA configuration data. This code is shown to the user who can choose to install or not.	Uses security mechanism (SEC) methods according to WAP-183-ProvCont-20010724-a (see www.openmobilealliance.org).
Interface		
Bearer	The Ericsson-Nokia solution	OMA Client Provisioning

Feature	Support for browser	
OTA via SMS	A question whether to install, with the code if available is asked. The user may have to choose whether to create a new profile or to replace an existing profile.	For NETWPIN the user is asked to accept to install received settings. For USERPIN, USERNETWPIN and USERPINMAC the user is subsequently asked to enter a PIN code that is a shared secret between the service provider and the user.
OTA via Cell Broadcast	-	The user is asked whether to accept the received settings or not.
Re-provisioning Interface	The Ericsson-Nokia solution	OMA Client Provisioning
OTA via SMS	Same interface as above.	If the settings previously installed were privileged or have higher priority, the settings might not be possible to install again unless the terminal is reset, otherwise as above.
OTA via Cell Broadcast	-	If the settings previously installed were privileged or have higher priority, the settings might not be possible to install again unless the terminal is reset, otherwise as above.
Carrier reset/provisioning	Yes, but not if the set is pre-configured in the factory and locked.	
SWIM	Not used for provisioning. The SWIM is only used for WAP security, both WTLS connections and digital signatures.	
SWIM certificate	Both client and trusted certificates can be used for WTLS connections and digital signatures.	
Applicative provisioning		
Preferred bearer customization	Yes	
Email customization	Yes, but not through provisioning.	
Other applications/features	Yes (MMS, SyncML, Wireless Village).	
Technologies		
OMA Client provisioning	Yes, WAP provisioning document v1.1.	
Openwave OTA	No	
Other	Yes. The Ericsson-Nokia solution. OTA Settings Specification v7.1.	
Provisioning bearer	SMS, Cell Broadcast	

Feature	Support for browser
Parameter sets available	< or = 10 (total number of Internet profiles)
Parameter sets for OTA modification	< or = 10 (total number of Internet profiles)
PUSH	
Content types	
Service Indication (SI)	Yes
Service Loading (SL)	Yes
Cache Operation (CO) content type	Yes
Session Initiation Application (SIA)	Yes
Man Machine Interface	
SI/content retrieval postponing	Yes
SI menu structure accessibility	Messaging, Inbox
SL reception warning	The user can make a choice if a dialogue is wanted or not before loading the SL. Messaging/Settings/Push/Allow push msg/Always ask
SIA reception warning	Yes
Cache size limitations	The oldest push in the inbox will be discarded.
Number of push messages	Depending on the size of the push messages. Around 20 push messages with a size of 500 bytes can be stored.
Push de-activate	Yes (Messaging/Settings/Push/Allow push msg).
Dynamic push menu changes	No. There are no changes in the menus when activating/deactivating push.
Security	
Mechanisms for push	None
Trust with PPG	Sending a SIA is the most trustful.
Denial of service/spoofing	
User agent profile	
OA profile content size	
URL location	On the manufacturer WAP site.
WTAI	
WTA Make Call	Yes
WTA Send DTMF	Yes
WTA Add Phone Book	Yes

Feature	Support for browser
DOWNLOAD	
WAP solutions	
HTTP GET solution to download content over WAP	Yes
Download Fun from Openwave	No
HTTP GET solution to download content	Yes
Other download content	Yes. No download limit when using HTTP protocol.
Download application/product memory check	Yes
Downloaded object solution	Yes. The user is informed where the content is saved and asked if it should be used at once or later.
UAP indication for downloading	Yes
Other features	Yes. Store, delete, forward, use, manage.
Object formats	Formats supported in the phone.
HTTP GET solution to download content	Yes
GRAPHICAL USER INTERFACE	
Man Machine Interface	
Selection keys	Yes
Separate/dedicated back or erase keys	Yes
Display backlight on when browsing	Yes
Predictive writing	Yes
“http://” string displayed automatically when entering URLs	Yes
Elements	
Pop-up menus	Yes, in XHTML.
Radio buttons	Yes, in XHTML.
Check boxes	Yes, in XHTML.
Buttons	Available as XHTML form controls.

Java™

Feature	Functionalities
Java 2, Micro Edition (J2ME™)	<ul style="list-style-type: none">• CLDC 1.1 (JSR 139)• MIDP 2.0 (JSR 118)• Wireless Messaging API (JSR 120/205)• Mobile Media API (JSR 135)• Java™ Technology for the Wireless Industry (JSR 185)• Java™ API for Bluetooth™ (JSR 82)• PDA Optional Packages for J2ME™ Platform (JSR 75)• Web Services (JSR 172)
Java 3D™	<ul style="list-style-type: none">• Mascot Capsule Micro3D Version 3• Mobile 3D Graphics API for J2ME™ (JSR 184)

Abbreviations

3GPP™

3rd Generation Partnership Project

AAC

Advanced Audio Coding

AMR

Adaptive Multi Rate.
Audio format for speech sounds.

API

Application Programming Interface

ARPU

Average Revenue Per User

CLI

Calling Line Identification shows the number of the caller, or a picture assigned to the number of the caller in the mobile phone display. Not all numbers can be displayed. Network-dependent service.

Card

A single WML unit of navigation and user interface. May contain information to present to the user, instructions for gathering user input, etc.

CDDA

Compact Disc Digital Audio

Cell-ID

Cell identification

CS

Circuit Switched

CSD

Circuit Switched Data

CSS

Cascading Style Sheet

Deck

A collection of WML cards.

DM

DM utilizes (E)GPRS as bearer (basic network connectivity needs to be in place) of the provisioning data and allows the operator to access the phone and check and set different settings such as Network connectivity ((E)GPRS), email, MMS, WAP and JAVA. Device Management is achieved by supporting Over The Air provisioning 7.1 (OTA), OMA Client Provisioning 1.1 (CP) and OMA Device Management (DM) 1.2

DRM

Digital Rights Management; controlling copying and distribution of contents, with respect to intellectual property rights.

DTMF or Touch Tone

Dual Tone Multi-Frequency signal – codes sent as tone signals. Used for telephone banking, accessing an answering machine, etc.

e-GSM

Extended GSM. New frequencies specified by the European Radio Communications Committee (ERC) for GSM use when additional spectrum is needed (Network-dependent). It allows operators to transmit and receive just outside GSM's core 900 frequency band. This extension gives increased network capability.

EFR

Enhanced Full Rate, speech coding.

EMS

Enhanced Messaging Service. Allows the user to add simple pixel pictures and animations, sounds and melodies to a text message. The EMS 3GPP™ standard also includes text formatting.

ETSI

European Telecommunications Standards Institute.

FM

Frequency Modulation of the (radio) carrier wave.

FR

Full Rate, speech coding.

GIF

Graphics Interchange Format

GPRS

General Packet Radio Services

GSM

Global System for Mobile Communications. The GSM system family includes GSM 850, GSM 900, GSM 1800 and GSM 1900. There are different phases of roll-out for the GSM system and GSM phones are either phase 1 or phase 2 compliant.

HR

Half Rate, speech coding.

HSCSD

High Speed Circuit Switched Data

HTML

HyperText Markup Language

HTTP

HyperText Transfer Protocol

IrMC

Infrared Mobile Communications standard

IrDA

Infrared Data Association

ISP

Internet Service Provider

ITTP

Intelligent Terminal Transfer Protocol

JPEG

Joint photographer expert group

LED

Light Emitting Diode

LAN

Local Area Network

LPC

Linear Predictive Coding

LTP

Long Term Predictor

MIDI

Musical Instrument Digital Interface

ME

Mobile Equipment

MIME

Multipurpose Internet Mail Extensions.

MMI

Man-Machine Interface. See UI.

MP3

Short for “MPEG-1 layer 3”, an effective audio coding scheme.

MPEG4/MPG4

MPEG-4 extends the earlier MPEG-1 and MPEG-2 algorithms with synthesis of speech and video, fractal compression, computer visualisation and artificial intelligence-based image processing techniques.

MS

Mobile Station

MT

Mobile Termination

ODI

Object Distribution Indicator

OMA

Open Mobile Alliance

OTA

Over-the Air Configuration. To provide settings for the phone by way of sending an SMS message over the network to the phone. This reduces the need for the user to configure the phone manually.

PDA

Personal Digital Assistant

PDP

Packet Data Protocol

PIM

Personal Information Management

PNG

Portable Network Graphic

QCIF

Quarter Common Intermediate Format

QVGA

Quarter Video Graphics Array

RPE

Regular Pulse Excited codec.

RTSP

Real Time Streaming Protocol session control.

SMS-C

Service Centre (for SMS).

SI

Service Indication

SL

Service Loading.

SIM card

Subscriber Identity Module card – a card that must be inserted in any GSM-based mobile phone. It contains subscriber details, security information and memory for a personal directory of numbers. The card can be a small plug-in type or credit card-sized, but both types have the same functions.

SMS

Short Messaging Service. Allows messages of up to 160 characters to be sent and received via the network operator's message centre to a mobile phone.

SP-MIDI

SP-MIDI stands for Scalable Polyphony MIDI.

SS

Supplementary Services

SSL

Secure Socket Layer

TA

Timing in Advance

TCP/IP

Transmission Control Protocol/Internet Protocol

TLS

Transport Layer Security

UI

User interface

UMTS

Universal Mobile Telecommunications System. The telecommunications system, incorporating mobile cellular and other functionality, that is the subject of standards produced by 3GPP™.

URL

Uniform Resource Locator.
The global address of documents and other resources on the World Wide Web.

USSD

Unstructured Supplementary Services Data

vCard

vCard automates the exchange of personal information typically found on a traditional business card, for use in applications such as Internet mail, voice mail, Web browsers, telephony applications, call centres, conferences, PIMs /PDAs, pagers, fax, office equipment, and smart cards. vCard is specified by IETF.

VGA

Video Graphics Array

VHF

Very high frequency. A band of radio frequencies falling between 30 and 300 MegaHertz.

WAP

Wireless Application Protocol. Handheld devices, low bandwidth, binary coded, a deck/card metaphor to specify a service. A card is typically a unit of interaction with the user, that is, either presentation of information or request for information from the user.

WAP Application

A collection of WML cards, with the new context attribute set in the entry card.

WAP service

A WML application residing on a web site.

WAV

WAV (or WAVE) is a Microsoft and IBM audio file format standard for storing audio on PCs

WBMP

Wireless BitMap.
A graphic format optimized for mobile computing devices.

WML

Wireless Markup Language. A markup language used for authoring services, fulfilling the same purpose as HyperText Markup Language (HTML) does on the World Wide Web (WWW). In contrast to HTML, WML is designed to fit small handheld devices.

WTLS

Wireless Transport Layer Security

XHTML

Extensible HyperText Markup Language

XML

Extensible Markup Language

Related information

Documents

- Sony Ericsson User Guide
- Sony Ericsson FAQ
- AT Command Reference Manual
- WAP 2.0 Specifications

Links

- www.SonyEricsson.com/
- www.ericsson.com/mobilityworld/
- www.midi.org
- www.extendedsystems.com
- www.gsmworld.com/
- www.bluetooth.com
- www.imc.org
- www.3gpp.org
- www.irda.org
- www.etsi.fr
- www.wapforum.org
- www.imc.org/pdi/
- www.syncml.org
- www.w3.org/TR/xhtml-basic/
- www.java.sun.com
- www.memorystick.org/
- www.memorystick.com/

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